

Hardik Mittal

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EDUCATION

International Institute of Informational Technology, Hyderabad

Sep 2021 – Jul 2026

B.Tech in Computer Science & MS in Computational Linguistics - CGPA : 8.91

- **Relevant Coursework** : NLP, Computer Vision, Statistical Methods in AI, Machine Data & Learning
- **Teaching Assistant** : Introduction to NLP, Digital Systems & Microcontrollers
- **Dean's Merit list** : Awarded twice for the spring and monsoon semesters in 2021-2022 and 2022-2023.

EXPERIENCE

Centre for Visual Information Technology, IIIT Hyderabad

May 2023 – Present

Undergraduate Researcher; **Advisor** : Prof. Makarand Tapaswi

Hyderabad, Telangana

- **Multimodal story summarization** by leveraging TV episode recaps and processing entire episodes by creating compact shot and dialog representations to predict importance scores for each video shot and dialog utterance.
- **Predicting and understanding the replayability patterns in YouTube videos** by leveraging multiple modalities and metadata to analyze why specific parts are replayed more than others by using 10,000+ videos.

AIC, IIIT Hyderabad

Aug 2023 – Mar 2024

Systems & Web Administrator Intern

Hyderabad, Telangana

- Migrated AIC-IIITH Foundation's website to an in-house IIIT server, ensuring smooth integration.
- Maintained the website with regular updates, security, and performance optimization.

SERC, IIIT Hyderabad

Dec 2022 – Jan 2023

Full Stack Developer Intern

Hyderabad, Telangana

- Designed and built a full-stack MERN application to simplify VR scene annotation for users with minimal coding skills, boosting data availability in the VR field.

PROJECTS

Improving The Change You Want to See | *Python3, Pytorch, Torchvision*

Apr 2024

- Reproduced and extended the results of the paper, "*The Change You Want to See*", by experimenting with Physics Informed Neural Network related losses and modifying attention mechanisms in encoder layers.

BayMax GPT, Fine-tuning GPT-2 | *Python3, PyTorch, Langchain, HuggingFace*

Nov 2023

- Implemented a Retrieval-Augmented Generation (RAG) Large Language Model with FAISS for improved data retrieval from medical datasets, boosting accuracy and context in information synthesis.
- Finetuned GPT2 to mimic Sheldon's speech from "The Big Bang Theory".

Computer Vision Models Gallery | *Python3, PyTorch, Streamlit, HuggingFace*

Sep - Nov 2023

- Created a webapp featuring models like CLIP, BLIP2, ALIGN, and ViFi-CLIP for tasks such as Question Answering, Captioning, and Classification, for use and comparison in research applications.

Lockness | *Python3, Pytorch, Crypten*

March - May 2024

- Developed an Secure Multi-Party Computation (SMPC) based protocol for secret sharing of ML models and data in python so that inference and training can be done without comprising neither the data nor the model weights.

PUBLICATIONS

- **On the Trail of Textual Origins: RoBERTa-BiLSTM Approach to Detect AI-Generated Text** ([Code](#)) : Jainit Sushil Bafna, **Hardik Mittal**, Suyash Sethia, Manish Shrivastava, Radhika Mamidi; SemEval 2024
- **Exploring Multimodal Emotion Cause Pair Extraction as Sequence Labelling Task** ([Code](#)): Suyash Vardhan Mathur, Akshett Rai Jindal, **Hardik Mittal**, Manish Shrivastava; SemEval 2024

LEADERSHIP / EXTRACURRICULAR

- **Vice Coordinator, E-Cell, IIITH** : Led E-Cell events, including entrepreneurship workshops with over 100+ attendees, provided key support in ideation & refinement to emerging startups, conducted Telangana's largest student-run Hackathon with 500+ participants and initiated a podcast with famous entrepreneurs like Abhilash Inumella and Sai Krishna Srirampur.
- **Coordinator, 0x1337 The Hacking Club, IIITH** : Led 100+ student cybersecurity events & workshops while managing a team of around 20 people.